forms of radiation with higher energy. However, their intensity is low and they do not present great dangers. Nevertheless they are a factor, now that the amount of radiation permitted for industrial workers has become more conservative. A plutonium-fabrication plant built in Germany, but never operated, is a monument to this increased conservatism.

Allegation: **Plutonium makes a nuclear reactor accident much worse**. All nuclear power plants that make electricity produce plutonium. For a typical U.S. plant, this plutonium generates about one-third of the total energy output. It is under controlled conditions. Under accident conditions, the reactor could be sufficiently damaged to result in the release of harmful radioactivity. The main threat would not be airborne plutonium. The accident at Three Mile Island in Pennsylvania dispersed no plutonium. Only a small amount was released during the much more severe accident at Chernobyl. Under no circumstances could a reactor explode like a nuclear bomb.

Concern: **Plutonium from peaceful uses can be diverted to nuclear bombs**. Each commercial nuclear power plant discharges once-used fuel each year containing several hundred pounds of plutonium. The U. S. does not attempt to recover the plutonium from the highly radioactive fuel. Other countries are recovering plutonium.

The recovery process is technically quite difficult. It is not realistic for terrorists. It requires a major national commitment in resources. Therefore the Russians and the U. S. are talking about including our excess weapons plutonium in fuel for power reactors. Not only would some bomb material be used up in producing energy, but also the remainder would be hard to recover after use in a reactor.

The countries that do recover plutonium from reactor fuel believe they account for the plutonium very carefully. Reactor plutonium is much less pure than weapons material. A very crude and inefficient nuclear bomb could be made from reactor plutonium at great risk to the producer.

Allegation: **Plutonium can neither be transported nor disposed safely.** No one anywhere in the world has been injured by radiation from shipments of nuclear materials. Plutonium, as nuclear weapons material, has been sent around the country for fifty years without a serious accident. Likewise shipments of used fuel from the nuclear Navy and from foreign reactors have had no serious accidents. The used fuels have operated successfully at much higher temperatures than the temperatures in the shipping containers. The containers are heavy, lead-shielded casks. They have been tested under very severe simulated accident conditions and proven safe.

The main form of plutonium loses its radioactivity very slowly. To lose it all will take about 200,000 years. (Remember that poisons like arsenic never lose their toxicity.) The EPA has approved the Waste Isolation Pilot Plant (WIPP) for storage/disposal of plutonium-contaminated waste generated by the nuclear weapons program. The State of New Mexico is challenging that decision. Their concern seems to center not around the plutonium, but around the hazardous organic solvents also in the waste.